

REMARKS

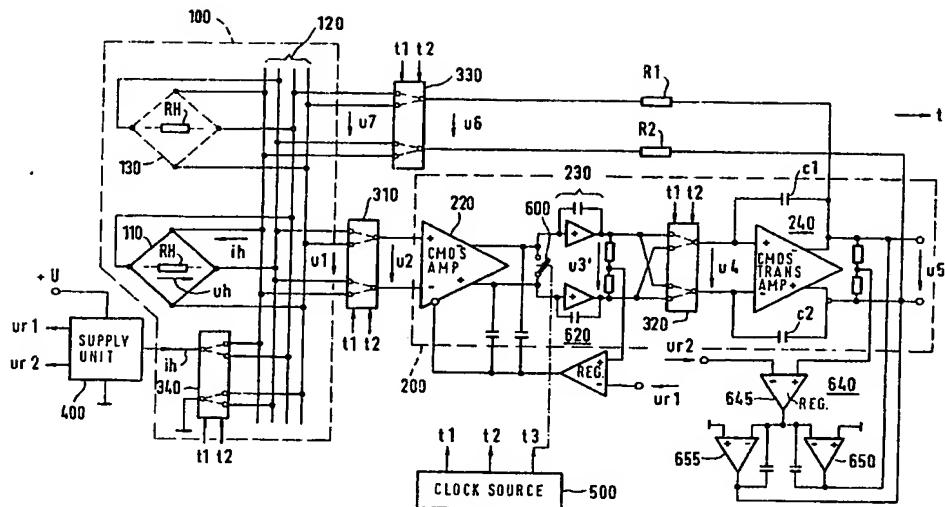
Claims 1-10 and 12-14 are pending in this application, of which claims 1 and 9 are independent. Favorable reconsideration and further examination is respectfully requested in view of the foregoing amendments and following remarks.

The specification was objected to for informalities. Appropriate amendments have been made. Withdrawal of the objection is therefore respectfully requested.

Independent claim 1 was rejected under 35 U.S.C. § 102(b) over Theus, et al. (U.S. Patent No. 5,844,427; "Theus"). As shown above, Applicants have amended the claims to define the invention with greater clarity. Accordingly, withdrawal of the rejection is respectfully requested.

Claim 1 recites a first signal modulator receiving first sense signals that correspond to first sensor signals from a first sensor. Claim 1 also recites a second signal modulator receiving second sense signals that correspond to second sensor signals from a second sensor. Applicants respectfully submit that Theus neither discloses nor suggests a system that includes a first and second signal modulator that receive first and second sense signals that correspond to first and second sensor signals from the corresponding first and second sensors.

Page 2 of the Office Action cites Theus for its supposed teaching of a "signal modulator (330) that receives sensor [sic] signals (u7) that correspond to the sensor signals." Applicants respectfully disagree with this characterization. In this regard, Theus describes that item 330 is an inverting device, not a signal modulator. Moreover, inverting device 330 receives signal u6 and outputs the signal u7 (col. 5, lines 14-18). Thus, in Theus, inverting device 330 does not receive sense signals u7 from a corresponding sensor (*i.e.*, sensor 130).



As shown in the figure above (FIG. 1A of Theus), Theus discloses an integrated sensor circuit with first and second Hall sensors for converting an applied physical input quantity into an electronic sensor signal (col. 1, lines 5-8). The two Hall sensors 110, 130 are connected together at their outputs via a four wire distribution network 120, and together, deliver a signal u_1 (col. 5, lines 45-49). Signal u_1 is converted into an output signal u_5 via an inverting device 310 and an amplifying stage 200 (col. 4, lines 39-62). Two resistors R_1, R_2 then receive signal u_5 and output signal u_6 to an inverting device 330 (col. 3, lines 6-10; col. 5, lines 12-18). Inverting device 330 outputs signal u_7 which is coupled with the outputs of the Hall sensors 110, 130 to form a new input signal u_1 (col. 3, lines 6-10; col. 5, lines 12-18). Therefore, Theus does not disclose a first signal modulator to receive a signal from a first sensor (e.g., sensor 110), and a second signal modulator to receive a signal from a second sensor (e.g., sensor 130).

For at least these reasons, claim 1 and its dependent claims are patentable over Theus.

Independent claim 9 and its dependent claims are patentable over the art for at least the same reasons. That is, claim 9 requires operating a system that includes plural sensors to detect at least one of a magnetic field and an electrical field, where each of the plural sensors comprises outputs to output sensor signals when a field is detected, and plural signal modulators to receive

sense signals that correspond to sensor signals from corresponding ones of the plural sensors, where each of the plural signal modulators has first and second control states, and where in the first control state, each signal modulator is configured to output sense signals, and, where in the second control state, each signal modulator is configured to output inverted sense signals. For the reasons explained above, this system is not disclosed in Theus. Furthermore Theus is silent about performing arithmetic operations using the first system signal and the second system signal of claim 1. Accordingly, claim 9 is believed to be patentable over Theus.

It is believed that all of the pending claims have been addressed. The absence, however, of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been addressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

In view of the foregoing amendments and remarks, Applicants respectfully submit that the application is in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicants' undersigned attorney can be reached at the address shown below. All telephone calls should be directed to the undersigned at 617-521-7896.

Please apply any other charges or credits to deposit account 06-1050.

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Respectfully submitted,

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